Math 212
Quiz 12

M 19 Sep 2016

Your name: _____

Exercise

(2 pt) Consider the function $f : \mathbf{R}^2 \to \mathbf{R}$ given by

$$f(x, y) = x^4 y^2 - 2xy^5.$$

(a) (1 pt) Compute $\frac{\partial f}{\partial x}$ and $\frac{\partial f}{\partial y}$.

(b) (1 pt) Compute $\frac{\partial^2 f}{\partial y \partial x}$ and $\frac{\partial^2 f}{\partial x \partial y}$. Verify that the Clairaut–Schwarz theorem (equality of mixed partials) holds.